Universidad Popular del Cesar

Reconocimiento de Patrones

Version 2024-I

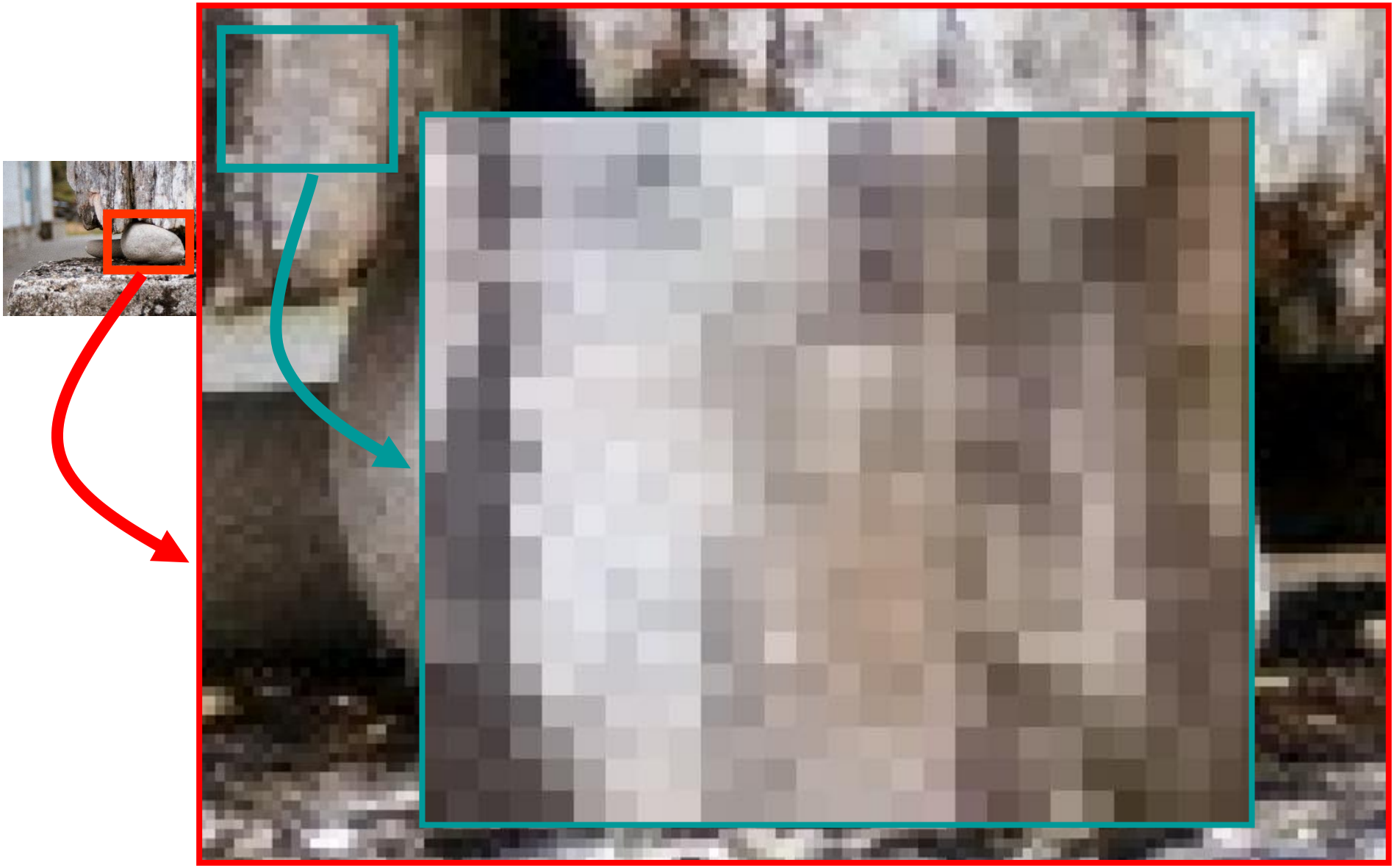
Definiciones

[Capítulo 1]

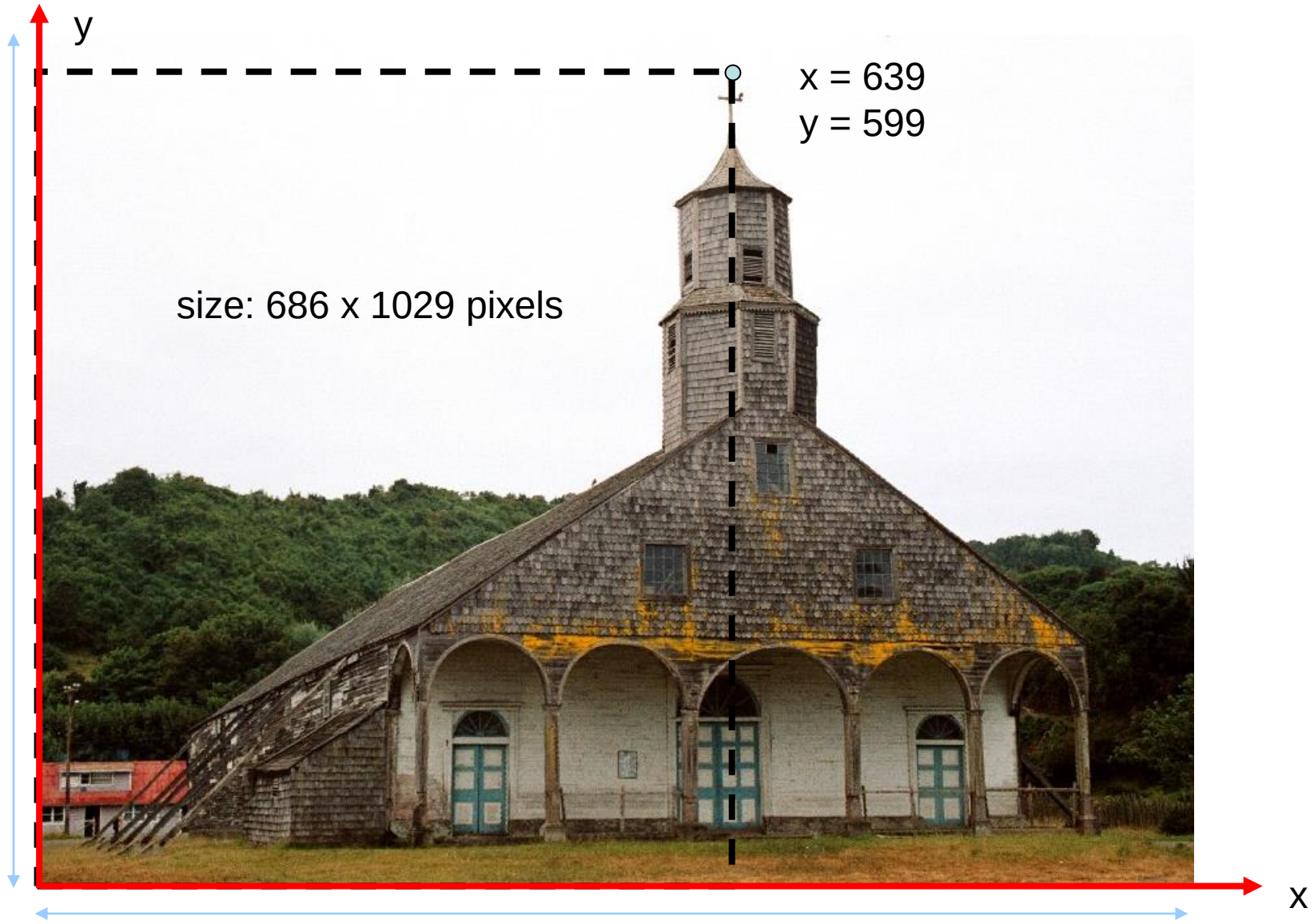
Dr. José Ramón Iglesias
DSP-ASIC BUILDER GROUP
Director Semillero TRIAC
Ingenieria Electronica
Universidad Popular del Cesar

Imágenes Digitales

Imágenes Digitales (zoom)



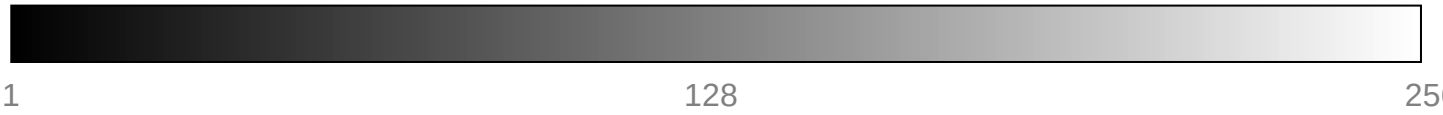
Imágenes Digitales (coordenadas)

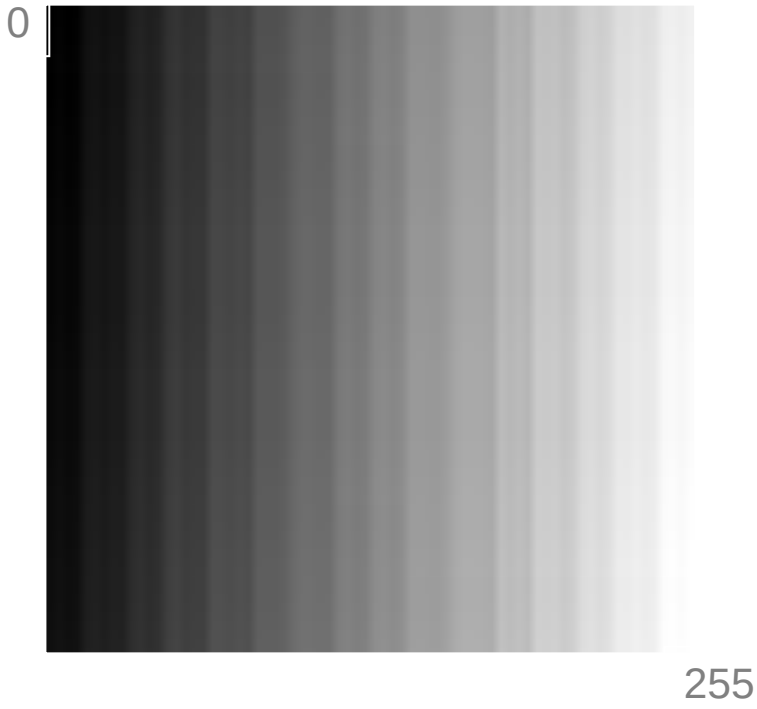


Imágenes Digitales (color)

Imágenes Digitales (color a blanco y negro)

Imágenes Digitales (tonos de gris)



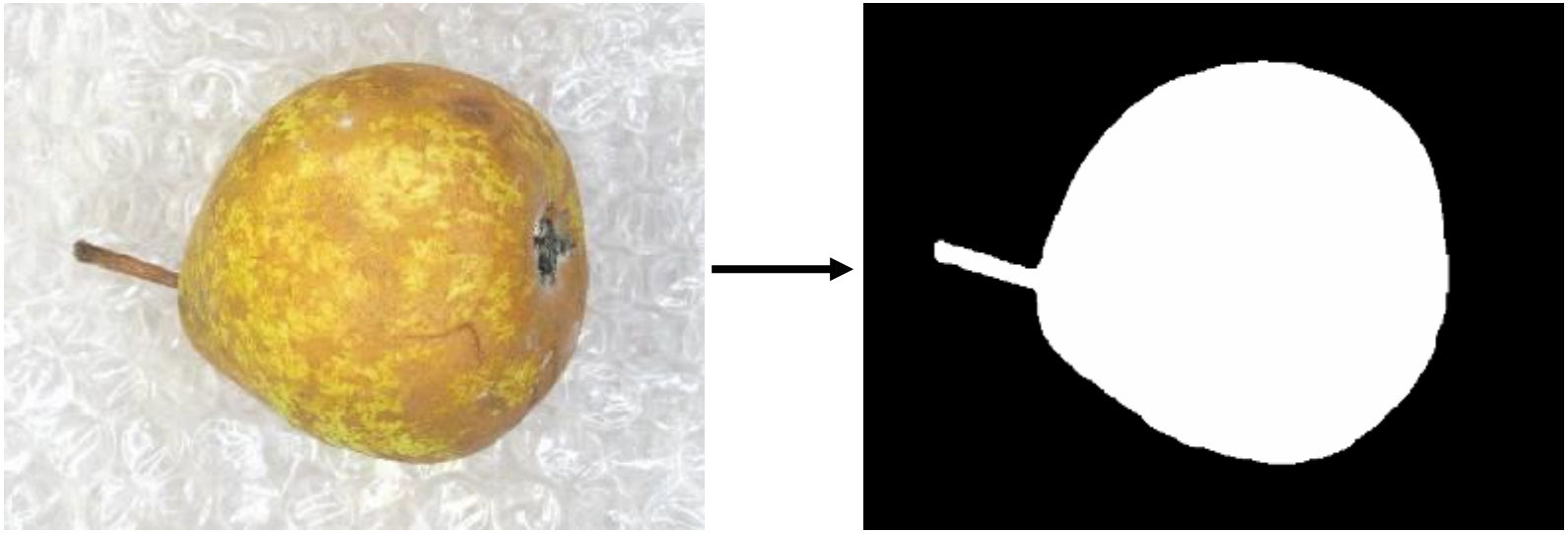


Imágenes Digitales (operaciones)

Imágenes Digitales (operaciones)

Image Processing:

The use of computer algorithms that take an image as input and return an image as output.



[INPUT] [OUTPUT]

Image Processing:

The use of computer algorithms that take an image as input and return an image as output.

[INPUT]

Image Processing:

The use of computer algorithms that take an image as input and return an image as output.

[INPUT]

Image Processing:

The use of computer algorithms that take an image as input and return an image as output.

[INPUT]

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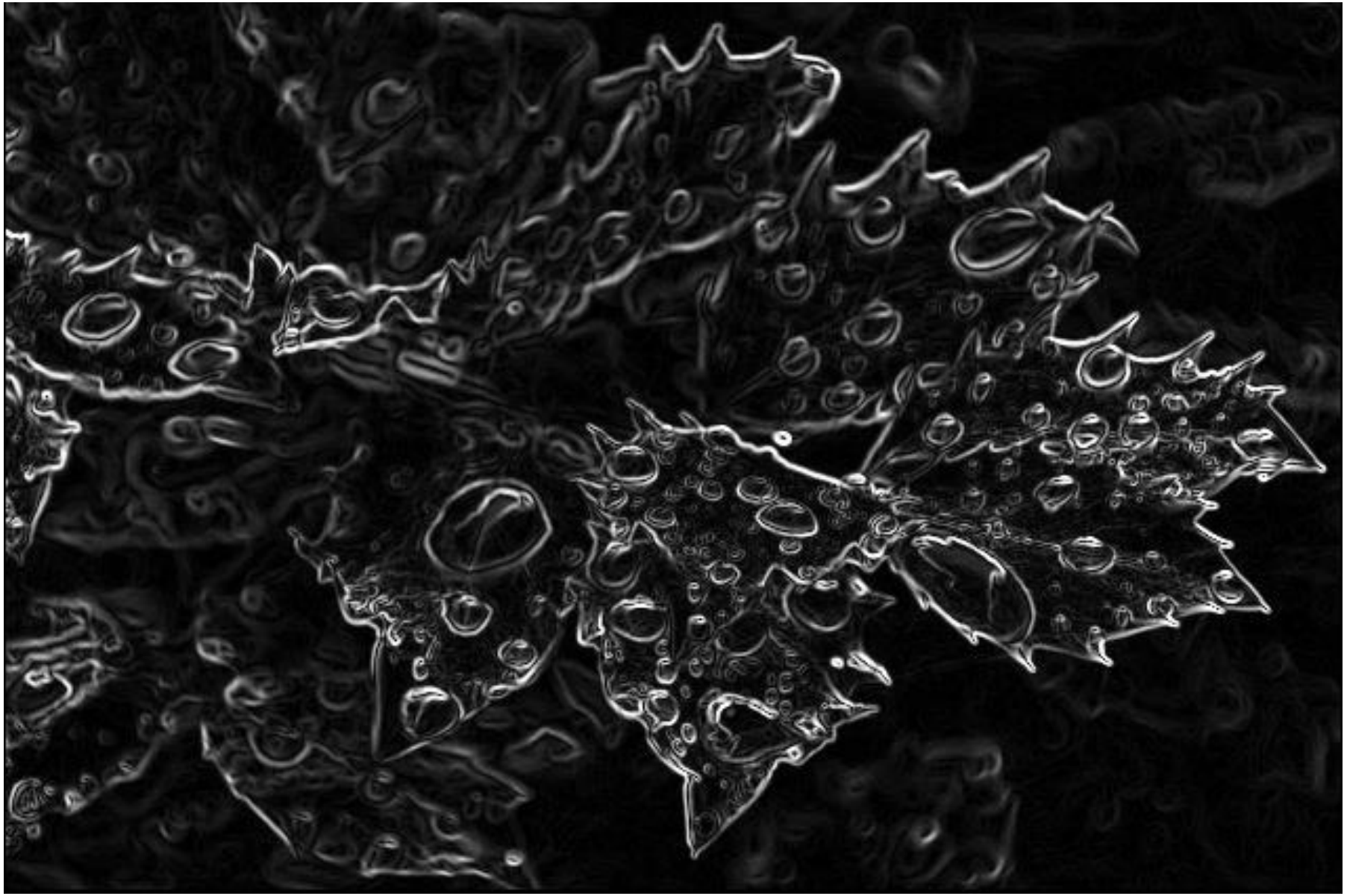
The use of computer algorithms that take an image as input and return an image as output.

[INPUT]



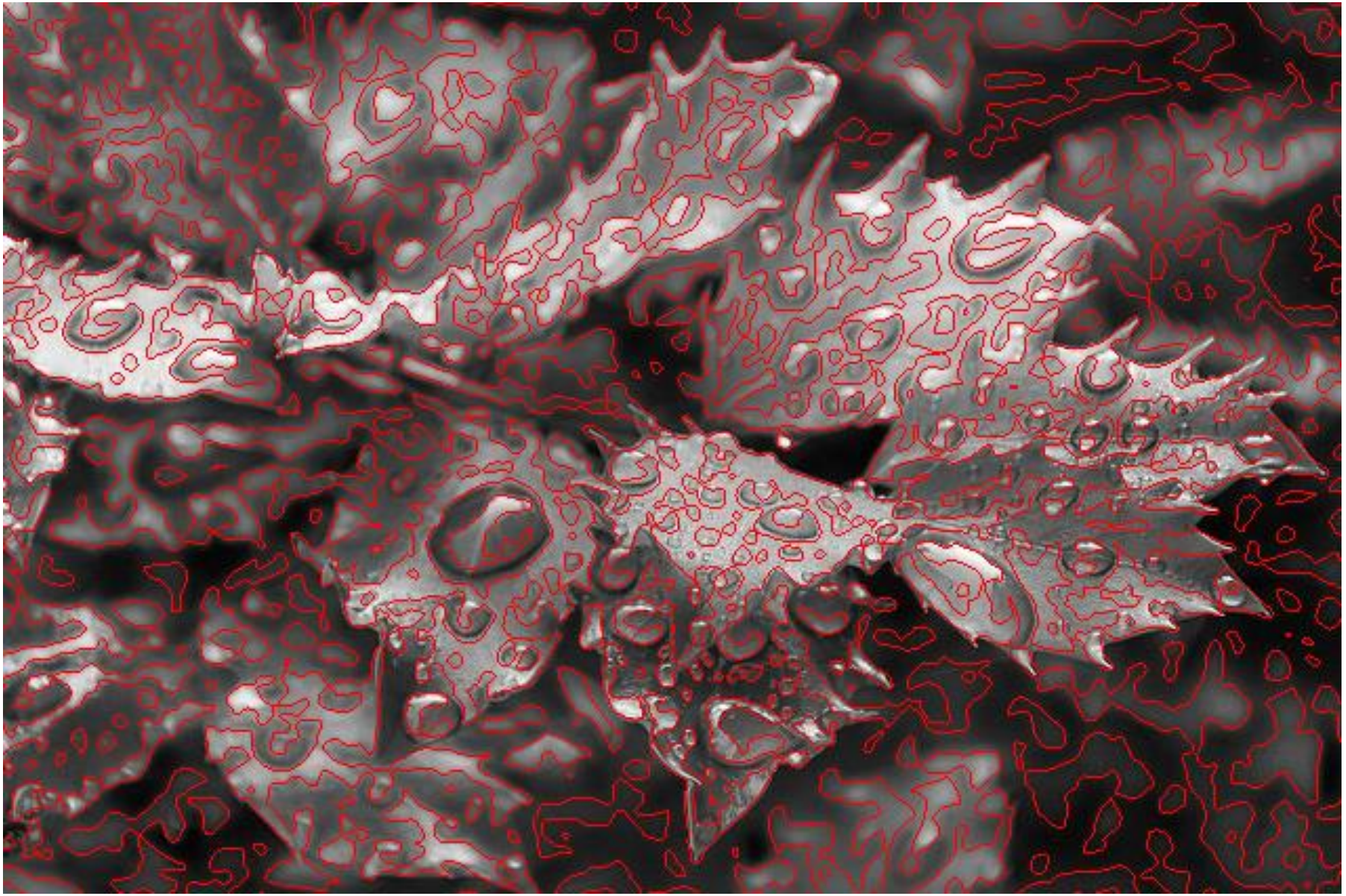


Image Processing:

The use of computer algorithms that take an image as input and return an image as output.

[INPUT]


107
236


236

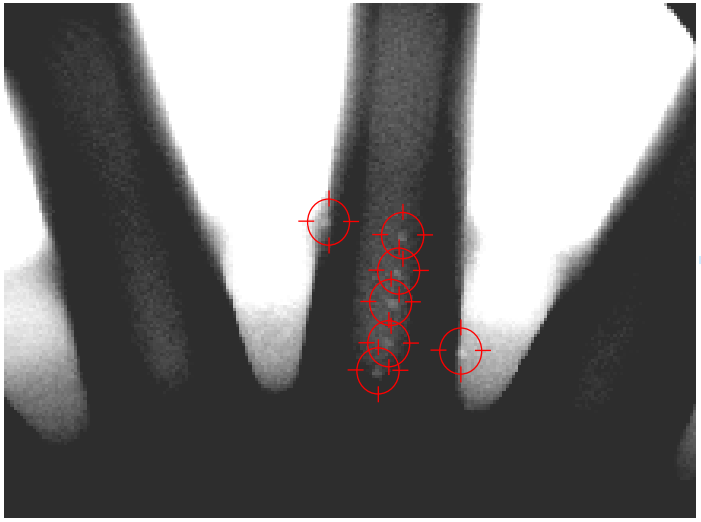
Image Processing:

The use of computer algorithms that take an image as input and return an image as output.

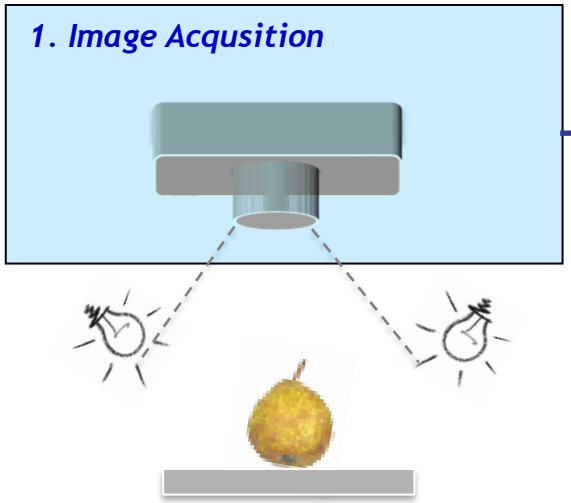
[INPUT]

Image Analysis:

The use of computer algorithms that take an image as input and return a measurement, an interpretation or a decision.

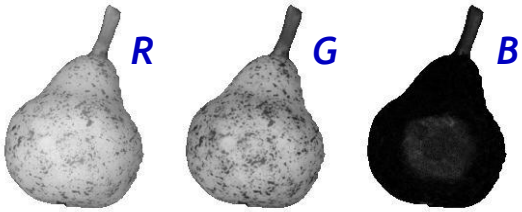


The wheel has 7 defects



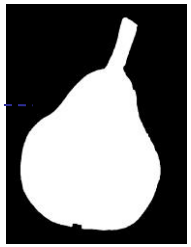
2. Preprocessing

3. Segmentation



color

geometry



4. Feature Extraction

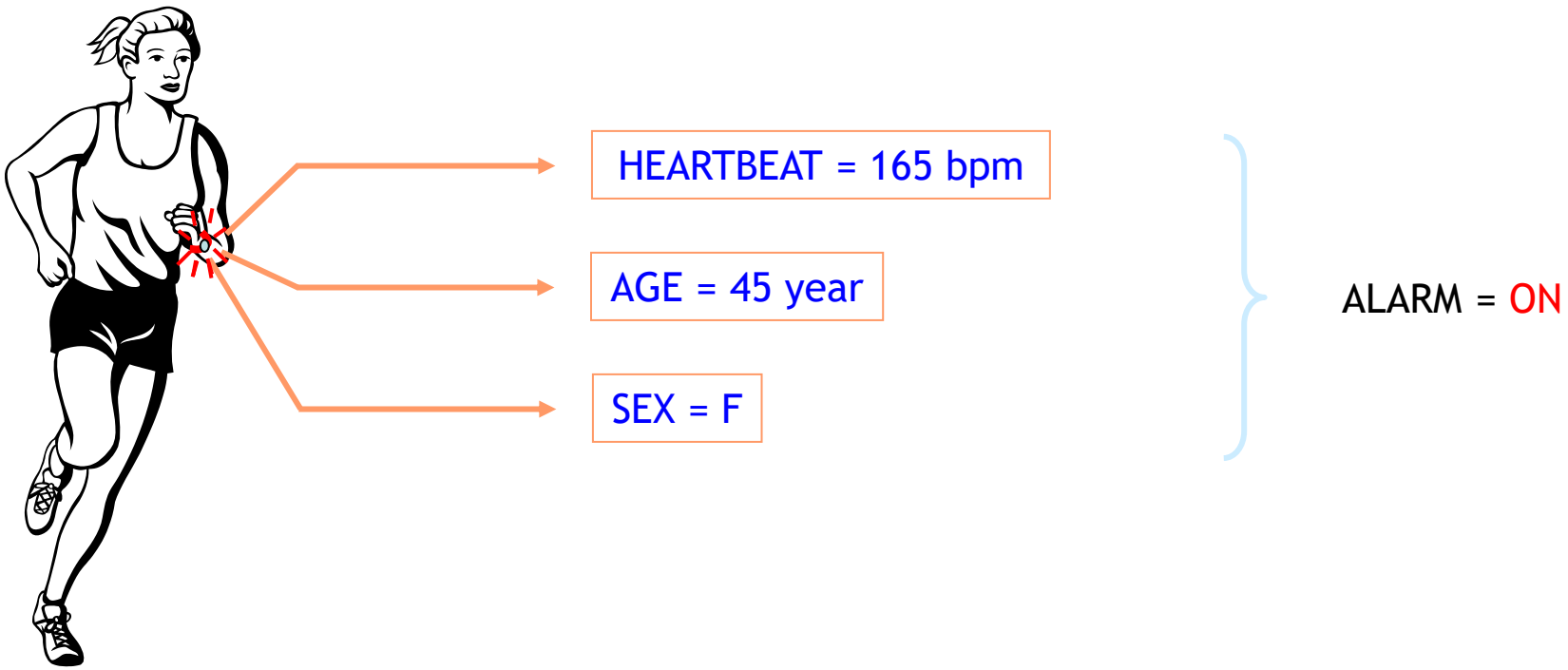
Feature	Value
Intensity (Yellow)	0.9875
# spots	542
:	:

5. Clasification

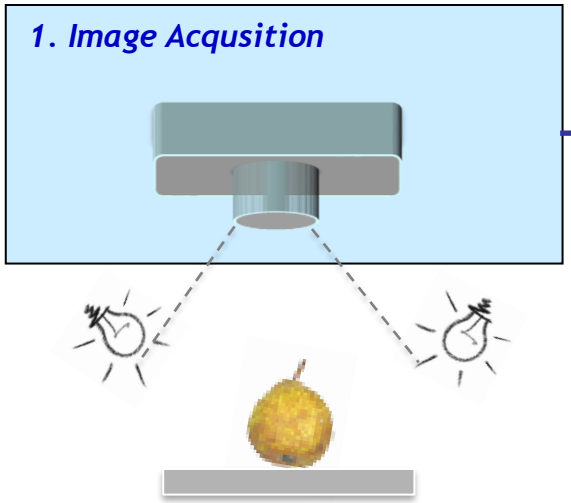
"premium"

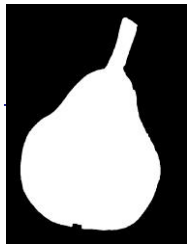
Pattern Recognition:

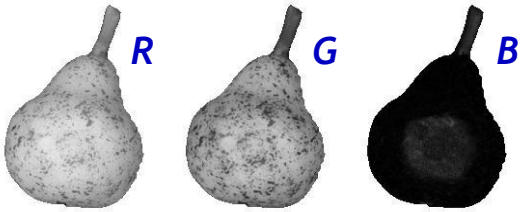
It is the science of making inferences based on data. Usually, it measures an object in order to assign it to a class.



Pattern Recognition:



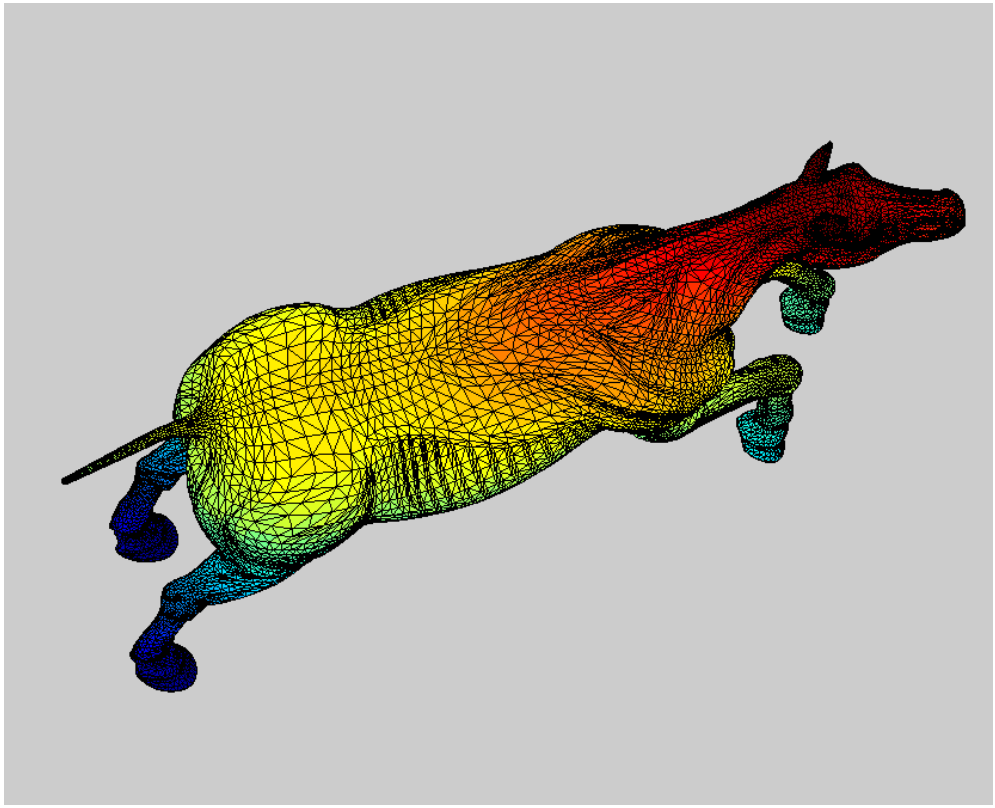




Feature	Value
Intensity (Yellow)	0.9875
# spots	542
:	:

Computer Graphics:

The use of computer algorithms to generate images from models (3D objects, texture, color, illumination, etc.).



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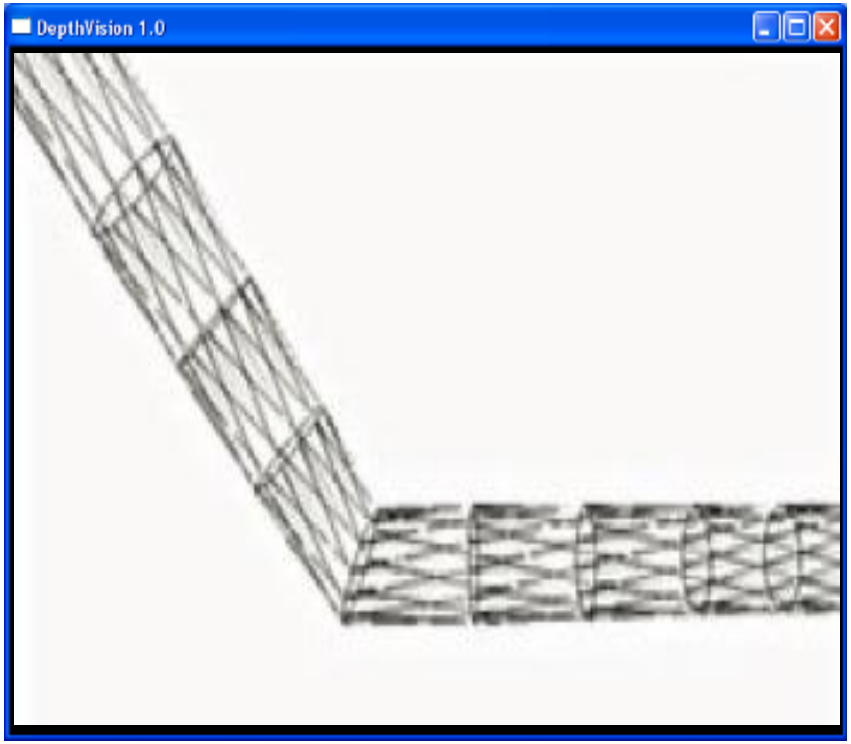


3D mesh

Depth map

Simulation

Mery, D.; Hahn, D.; Hitschfeld N. (2005): Simulation of Defects in Aluminium Castings Using CAD Models of Flaws and Real X-ray Images. Insight, 47(10):618-624. [PDF]

Computer Graphics:

The use of computer algorithms to generate images from models (3D objects, texture, color, illumination, etc.).

Computer Vision:

Computer vision is the science of endowing computers the ability to see.

[Faugeras]

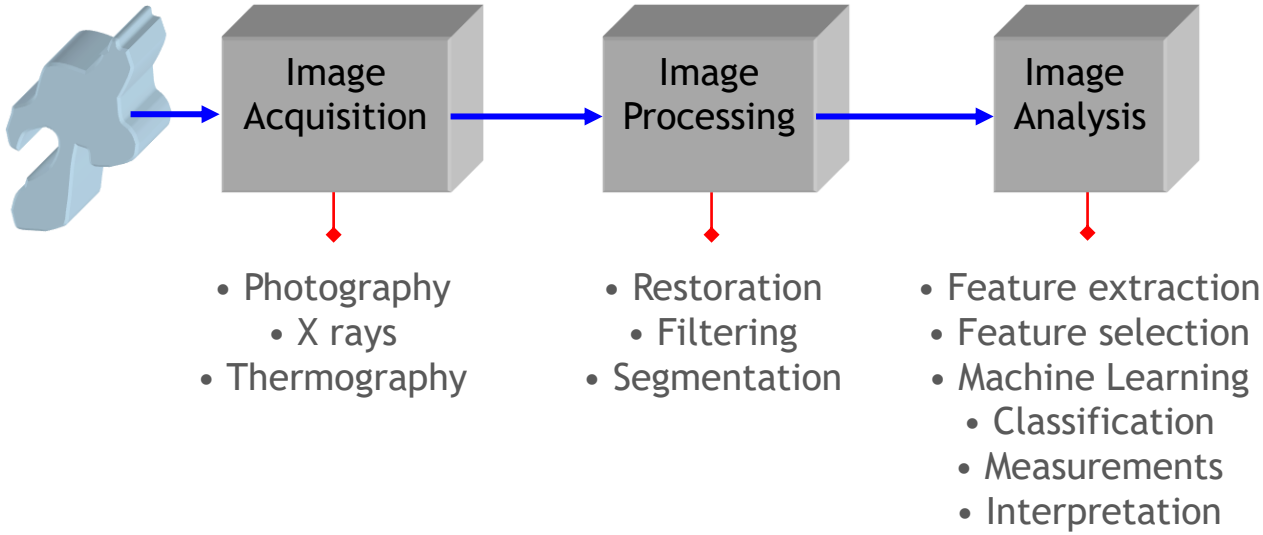
Computer Vision:

Computer vision is the science of endowing computers the ability to see. [Faugeras]

Computer vision is a field that includes methods for acquiring, processing, analyzing, and understanding images and, in general, high-dimensional data from the real world in order to produce numerical or symbolic information, e.g., in the forms of decisions. [wikipedia]

Computer Vision System:

Object



Computer Vision System: